

SAF-B00-004
Industrial Hygiene Sampling – Airborne
FINAL DATA

NO DISTRIBUTION REQUIRED

COMMENTS:

SDG 05I-2813-01 SAF-B00-004

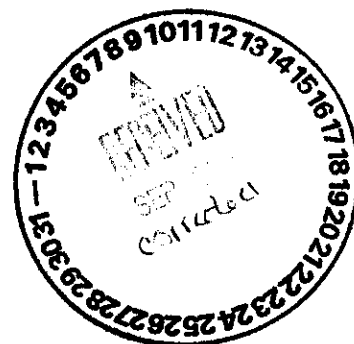
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☒ Complete Partial

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Report Identification Number: 05I-2813-01
 Subcontract Number: 0000X-BO-G0058-B-Mod#3
 Name of Industrial Hygienist: Henry W. Ruby / Denise A. Pitts
 Laboratory Identification Number: DCHM
 SAF#: B00-004; B00-005
 Payroll#: 73399



Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
08 Jul 2005	J03FL6	05I26296	NMAM 7300M	G056D00Y	MCE
08 Jul 2005	J03FD6	05I26297	NMAM 7300M	G056D00Y	MCE
08 Jul 2005	J03FD7	05I26298	NMAM 7300M	G056D00Y	MCE
08 Jul 2005	J03FD5	05I26299	NMAM 7300M	G056D00Y	MCE
08 Jul 2005	J03FD8	05I26300	NMAM 7300M	G056D00Y	MCE
08 Jul 2005	J03FD9	05I26301	NMAM 7300M	G056D00Y	MCE
08 Jul 2005	J03FL8	05I26302	NMAM 7300M	G056D00Y	MCE
08 Jul 2005	J03FL7	05I26303	NMAM 7300M	G056D00Y	MCE
08 Jul 2005	J03FD3	05I26304	NMAM 7300M	G056D00Y	MCE
08 Jul 2005	J03FD4	05I26305	NMAM 7300M	G056D00Y	MCE

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Name: Michelle Paradise
 Title: Chemist
 Date: July 14, 2005

Report Identification Number: 05I-2813-01
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General Set Information: There are 10 samples in set 05I-2813-01 and 15 samples in set 05I-2814-01 for a total of 25 samples. The samples were analyzed for beryllium on MCE filter. No problems were encountered with the receipt of these samples and no contact with the CTR was required.

Method Summary: Samples were transferred to 50 ml centrifuge tubes and digested in the presence of 10 mL of 1:1 (v/v) nitric acid. Samples were digested in a hot block set at 110°C (with a thermometer reading of 97.2°C) for 40 minutes. Samples were then diluted to a 25 mL volume with ASTM Type II Water. Samples were shaken and delivered for ICP analysis.

Sample Preparation: All samples were prepared in accordance with DCL SOP "IH-AN-021" and NIOSH method NMAM 7300 modified for hot block digestion.

Holding Times: The holding times were met for both sample preparation and analysis.

Instrument Calibration: Instrument calibration was performed in accordance with NIOSH method NMAM 7300.

Initial and Continuing Calibration Verification Analysis: Beryllium recoveries in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of $\pm 10\%$.

Initial and Continuing Calibration Blank Analysis: No beryllium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Contract Required Detection Limits (CRDL) of 0.02 ug/sample.

Method Blank Analysis: No beryllium was found in the media blank sample above the Contract Required Detection Limit (CRDL).

Dilution(s): None of the samples were diluted.

Laboratory Control Sample and Duplicate Analysis: Two Laboratory Control Samples (LCSs) and two Laboratory Control Sample Duplicates (LCSDs) were prepared and analyzed with the sample batch. The LCSs results are within the control limit of $\pm 20\%$. The Relative Percent Differences (RPDs) between the LCSs and the LCSDs are within the control limit of 20%.

Replicate Analysis: Three samples in this batch were replicated. The RPDs between the samples and the replicates are within the control limit of 20%. If the result of the sample or replicate is below the CRDL, replicate analysis is negligible.

Flagging Codes:

U - Analyte not detected above the Method Detection Limit (MDL) of 0.004 ug/sample.

J - Analyte result is reported above the Method Detection Limit (MDL) of 0.004 ug/sample, but below the Contract Required Detection Limit (CRDL) of 0.02 ug/sample.

Nonconformance/Corrective Action Report (NC/CAR): N/A

Sample Calculation: The final results are calculated by the following equation:

Final result for aqueous samples ($\mu\text{g}/\text{sample}$) = (A) x (B) x (C)

Where:

A = Analyte concentration from instrument determination ($\mu\text{g}/\text{L}$)

B = Concentration factor from sample preparation

= $\frac{\text{Final Volume of Digestate (L)}}{\text{Sample}}$

C = Dilution performed at time of analysis

Example Calculation: $(1 \mu\text{g}/\text{L}) \times (0.025 \text{ L}/\text{sample}) \times (1) = 0.025 \mu\text{g}/\text{sample}$

Miscellaneous Comments: None.

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SAF#: B00-004; B00-005
Payroll#: 73399

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium µg/sample		Beryllium µg/m ³		Air Volume L	
J03FL6	05I26296	14 Jul 2005	<0.02	U	<0.002	U	1860.	
J03FD6	05I26297	14 Jul 2005	<0.02	U	<0.002	U	1669.	
J03FD7	05I26298	14 Jul 2005	<0.02	U	<0.002	U	2274.	
J03FD5	05I26299	14 Jul 2005	<0.02	U	<0.002	U	1953.	
J03FD8	05I26300	14 Jul 2005	<0.02	U	<0.003	U	1493.	
J03FD9	05I26301	14 Jul 2005	<0.02	U	<0.003	U	1477.	
J03FL8	05I26302	14 Jul 2005	<0.02	U	<0.02	U	260.	
J03FL7	05I26303	14 Jul 2005	<0.02	U	<0.005	U	744.	
J03FD3	05I26304	14 Jul 2005	<0.02	U	**		**	
J03FD4	05I26305	14 Jul 2005	<0.02	U	**		**	
Limit of Detection (LOD)			0.004					
Required Detection Limit (RDL)			0.02					

U - Parameter not detected above LOD.

J - Parameter between LOD and RDL.

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Name of Industrial Hygienist: Henry W. Ruby / Denise A. Pitts

Laboratory Identification Number: DCHM

SAF: B00-004; B00-005

Payroll#: 73399

Batch ID: G056D00Y

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-233740-2	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
QC-233740-2	LCS	Beryllium	µg/sample	9.92	NA	10.0	99.2	NA
QD-233740-2	LCSD	Beryllium	µg/sample	10.4	9.92	10.0	104.	4.47
BL-233740-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
QC-233740-1	LCS	Beryllium	µg/sample	10.1	NA	10.0	101.	NA
QD-233740-1	LCSD	Beryllium	µg/sample	10.1	10.1	10.0	101.	0.584

MB - Method Blank

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MSD - Matrix Spike Duplicate

LD - Laboratory Duplicate

NA - Not Applicable

ND - Parameter not detected above LOD

LCS, LCSD Percent Rec. = (Result / Target) * 100.0

MS, MSD Percent Rec. = ((Result - Parent) / Target) * 100.0

LCS, LCSD Relative Percent Diff. = ((|LCS - LCSD|) / ((LCS + LCSD)/2.0)) * 100.

MS, MSD Relative Percent Diff. = ((|MS - MSD|) / ((MS + MSD)/2.0)) * 100.

LD Relative Percent Diff. = ((|Parent - LD|) / ((Parent + LD)/2.0)) * 100

151-2813-01

Bechtel Hanford, Inc.		ERC/INDUSTRIAL HYGIENE CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										
Collector: Daniel Wolf		Company Contact Henry W. Ruby and Denise A. Pitts			Telephone No. 373-5600			Project Coordinator Joan H. Kessner		Data Turnaround 24 HOURS		
Payroll #: 73399		Sampling Location 300 AREA - 312 Building			SPECIAL INSTRUCTIONS All relevant COAs must be provided: R300xxJ452			SAF No. B00-004; B00-005				
Type of Sample: Air Sample for Beryllium					ANALYSIS METHOD (SPECIFIC): NIOSH 7300 - Beryllium (Be)			Method of Shipment FEDERAL EXPRESS				
Shipped To: DATACHEM - Salt Lake City, Utah								Bill of Lading/Air Bill No. 852833720083				
POSSIBLE SAMPLE HAZARD/REMARKS BERYLLIUM		MATRIX A - AIR WI - WIPE X - OTHER		Preservation (ie., cooling required, etc.)		Is		No		Yes		
Special Handling and/or Storage N/A												
SAMPLE ANALYSIS						Airborne		Lead Airborne		Be Airborne		
SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L)	Comments								
J03FL6	A	7/8/05	2189	1860 Perimeter								
J03F06	A	7/8/05	194	1669 Perimeter								
J03F07	A	7/8/05	2274	Perimeter								
J03F05	A	7/8/05	1953	Perimeter								
J03F08	A	7/8/05	1493	Perimeter								
J03F09	A	7/8/05	1477	Area								
J03FL8	A	7/8/05	260	Personal								
J03FL7	A	7/8/05	744	Personal								
J03F03	A	7/8/05	N/A	Blank								
J03F04	A	7/8/05	N/A	Blank								

151-212796

[illegible]

Kessner, Joan H

From: Griffiths, Kevin W. [griffiths@datachem.com]
Sent: Thursday, September 08, 2005 7:59 AM
To: Kessner, Joan H
Cc: henry.ruby@wch-rcc.com; denise.pitts@wch-rcc.com
Subject: RE: Corrections on Volumes (05I-2813-01/SDR BS05-155)
Attachments: 05I-2813-01.TXT; 05I-2813-01r.pdf

Kevin Griffiths
Project Manager
(801) 904-4302
Cell (801) 835-9597
griffiths@datachem.com

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From: Kessner, Joan H [mailto:joan.kessner@wch-rcc.com]
Sent: Thursday, September 08, 2005 8:17 AM
To: Griffiths, Kevin W.
Subject: FW: Corrections on Volumes (05I-2813-01/SDR BS05-155)
Importance: High

Kevin--

I know this is about the last thing you want to see, but I'm trying to clean up the last of the outstanding corrections - so here is the first one.

Also I did check out the area corrections and you were completely right, so they are gone. The really sad thing is that there were only 2.....

There are more to come,
Joan

From: Whatley, Zona G (Gwen)
Sent: Wednesday, July 13, 2005 7:07 AM
To: Kessner, Joan H
Subject: Corrections on Volumes
Importance: High

Joan - Please disregard the 7/8 volume corrections sent previously this morning; the corrections for the sampling of 7/8 are

Sampling Date - 7/8/05

9/8/2005

IH Air Samples for Beryllium, DataChem, Utah

Sample Set of COC - J03FL6 - J03FD4

Sample J03FL6 was recorded as having a volume of 2159 liters, the correct volume is 1860

Sample J03FD6 was recorded as having a volume of 1941 liters, the correct volume is 1669

Sample J03FD5 was recorded as having a volume of 2273 liters, the correct volume is 1953

Thank you,

Gwen

531-0676

9/8/2005